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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------|---------------------|------------------|
| 10/646,818  | 08/25/2003  | Masaru Inoue           | 031058              | 1815             |
| James E. Armstrong, IV<br>EDWARDS, ANGELL, PALMER & DODGE LLP<br>P.O. Box 55874<br>Boston, MA 02205 |             |                        |                     |                  |
| EXAMINER<br>HEINRICH, SAMUEL M  |             |                        |                     |                  |
| ART UNIT<br>3742  |             | PAPER NUMBER           |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/646,818

**Applicant(s)**

INOUE ET AL.

**Examiner**

Samuel M. Heinrich

**Art Unit**

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election of Group I in the reply filed on April 08, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 6-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3, "measuring load on the suspension and obtaining a load adjustment amount from the measured load; and measuring an angle of the suspension and obtaining an angle adjustment amount from the measured angle" are not clear descriptions. Claim 3, "defining, by using irradiation shapes in advance" and "preparing combinations of radiation shapes in advance" are not clear descriptions.

Claim 4, "correcting an angle in plus" and "correcting an angle in minus" are non-idiomatic descriptions. Claim 4, "an area I to an area IV" is not a positive description of the four separate areas subsequently described.

Claim 5, "correcting a pitch angle in plus" and "correcting a pitch angle in minus" are non-idiomatic descriptions.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,837,092 to Ubl et al in view of USPN 4,691,241 to Tomohisa et al and in view of USPN 5,622,567 to Kojima et al.

Ubl et al describe (e.g., column 11, lines 1-23) introducing positive or negative bias into suspension elements in order to correct positive or negative pitch error. Ubl et al describe (e.g., Claim 1) scanning "across at least a predetermined region".

Tomohisa et al describe (Summary, column 1, lines 12-19) a laser beam is "brought to the galvano mirror to be polarized."

Kojima et al describe (column 31, paragraph 1) "Focal length of the condenser lens is long, and therefore the sizes of the laser beams focused on the entire surface of the target are approximately the same."

The use of well known beam control described by Tomohisa et al and Kojima et al in the adjustment method of Ubl et al would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because laser apparatus beam energy applied to the work can be finely controlled. With respect to claims 4 and 5, assigning map regions or feature areas on the workpiece would have been obvious in order to easily identify locations for beam application.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,837,092 to Ubl et al in view of USPN 6,011,239 to Singh et al in view of USPN 4,691,241 to Tomohisa et al and in view of USPN 5,622,567 to Kojima et al.

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Singh et al show (Figure 7) application of laser energy to selected portions of a thin plate head suspension element in order to bend the suspension slightly.

Tomohisa et al describe (Summary, column 1, lines 12-19) a laser beam is "brought to the galvano mirror to be polarized."

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The use of well known beam control described by Tomohisa et al and Kojima et al in the adjustment methods of Ubl et al and Singh et al would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because laser apparatus beam energy applied to the work can be finely controlled and the energy control described by Singh et al (Abstract) can be optimized.

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Kojima et al describe (column 31, paragraph 1) "Focal length of the condenser lens is long, and therefore the sizes of the laser beams focused on the entire surface of the target are approximately the same."

Dufresne et al describe (column 13, lines 1-9) well known shaping of a beam to impart particular "the precise pattern needed".

The use of well known beam control described by Tomohisa et al and Kojima et al in the adjustment methods of Ubl et al and Singh et al would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because laser apparatus beam energy applied to the work can be finely controlled and the energy control described by Singh et al (Abstract) can be optimized.

The use of well known shaping of a beam to impart "the precise pattern needed" as described by Dufresne et al (column 13, lines 1-9) would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the use of known preselected shapes speeds beam application and speeds production. Applicant's "combined shape of characters" and "between a first point and an end point" are shapes which are reproducible using shapes and descriptions described by Dufresne et al.

With respect to claims 4 and 5, assigning map regions or feature areas on the workpiece would have been obvious in order to easily identify locations for beam application.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of USPN 6,837,092 to Ubl et al in view of

USPN 6,011,239 to Singh et al in view of USPN 4,691,241 to Tomohisa et al and in view of USPN 5,622,567 to Kojima et al in view of USPN 6,086,773 to Dufresne et al.

AAPA describes (Specification, Background of the Related Art) well known laser application which is used to correct suspension components.

Ubl et al describe (e.g., column 11, lines 1-23) introducing positive or negative bias into suspension elements in order to correct positive or negative pitch error. Ubl et al describe (e.g., Claim 1) scanning "across at least a predetermined region".

Singh et al show (Figure 7) application of laser energy to selected portions of a thin plate head suspension element in order to bend the suspension slightly.

Tomohisa et al describe (Summary, column 1, lines 12-19) a laser beam is "brought to the galvano mirror to be polarized."

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Dufresne et al describe (column 13, lines 1-9) well known shaping of a beam to impart particular "the precise pattern needed".

The use of well known beam control described by Tomohisa et al and Kojima et al in the adjustment methods of AAPA, Ubl et al, and Singh et al would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because laser apparatus beam energy applied to the work can be finely controlled and the energy application and energy control described by AAPA, Ubl et al, and Singh et al can be optimized.



The use of well known shaping of a beam to impart "the precise pattern needed" as described by Dufresne et al (column 13, lines 1-9) would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because the use of known preselected shapes speeds beam application and speeds production. Applicant's "combined shape of characters" and "between a first point and an end point" are shapes which are reproducible using shapes and descriptions described by Dufresne et al.

With respect to claims 4 and 5, assigning map regions or feature areas on the workpiece would have been obvious in order to easily identify locations for beam application.

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shang describes laser pitch/roll change.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel M. Heinrich whose telephone number is 571-272-1175. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu B. Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samuel M Heinrich/  
Primary Examiner, Art Unit 3742